



Illinois Department of Transportation

Memorandum

To: DEPUTY SECRETARIES, DIRECTORS AND BUREAU CHIEFS
From: Dianna L. Taylor
Bureau Chief of Personnel Management
Subject: Technical Vacancy
Date: August 14, 2017

Attached are the Position Summary Sheet and Position Description for the vacant technical position listed below. Please post this vacancy announcement August 16, 2017 in the designated areas.

The deadline for applicants to submit their applications for consideration is **4:30 p.m. on Tuesday, August 29, 2017**. Applications will not be accepted after that time and date.

NOTE: Applicants must submit an ACTIVE Illinois Engineer Intern License or *official college transcripts with application. Please be advised that if a high volume of applications are received, the applications may be screened to establish a smaller pool of applicants for interview. The screening will be based on the information contained in the application.

If you have any questions, please contact the Bureau of Personnel Management at 217/782-5594.

EE I (4 pos)	Electrical Operations Cadre Engineer Region 1/District 1/Electrical Operations Highways Project Implementation Schaumburg
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Attachments
41807

*IDOT considers official college transcripts to be original embossed transcripts in a sealed envelope from the university/college or in PDF format sent from the university/college directly to the Bureau of Personnel Management.

Technical Applications [PM1080 rev 6/1/17](#) **must be received** by the Bureau of Personnel Management, Room 113, 2300 South Dirksen Parkway, Springfield, IL 62764 (Fax# 217/557-3134) or emailed to DOT.CO.BPM.EmploymentApplications@Illinois.gov by **Tuesday, August 29, 2017, 4:30 p.m.** Please include address, daytime phone and position for which applying if not already listed on application. Applicants will be notified in writing to schedule interviews.

NOTE: Applicants must submit an ACTIVE Illinois Engineer Intern License or *official college transcripts with application. Please be advised that if a high volume of applications are received, the applications may be screened to establish a smaller pool of applicants for interview. The screening will be based on the information contained in the application.



An Equal Opportunity Employer

Position Summary Sheet

Classification:	Electrical Engineer I (4 Positions)	Salary:	\$4,540 - \$5,775*
Position Title:	Electrical Operations Cadre Engineer	Union Position:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Position Number:	PW151-23-51-921-00-01	IPR#:	41807

Office/Central Bureau/District/Work Address:

Office of Highways Project Implementation/Region One/District One/Electrical Operations/201 W. Center Ct., Schaumburg, IL

Description Of Duties:

This position, under engineering supervision, performs engineering analyses and support services to the Bureau of Electrical Operations in the design, operation, and maintenance of the district's electrical, mechanical and communications systems.

Special Qualifications:

Required:

- Bachelor of Science in Electrical or Mechanical Engineering from an ABET accredited university or must be a Licensed Engineer Intern in the State of Illinois
- Minimum 2.5 cumulative GPA in engineering related courses (If GPA is between a 2.0-2.5, candidate must have passed Fundamentals of Engineering Exam)
- Official college transcripts must be included with application
- Valid driver's license
- Districtwide travel; and overtime
- Ability to traverse uneven terrain and climb ladders and supports

Desired:

- Strong oral and written communication skills
- Ability to apply modern methods, principles, techniques and practices of electrical engineering in the development of plans for highways activities

Shift/Remarks:

8:00 am – 4:15 pm / Monday – Friday (45 minute lunch; Shift is subject to variance according to district operational needs)

THIS IS AN ENTRY LEVEL POSITION THAT IS PART OF A ROTATION PROGRAM

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*Individual salary offers are computed based on an applicant's current position and experience level in comparison to the posted title as well as internal equity of staff in the organizational unit.

**Technical Application PM1080 (revised 6/1/17) is required. No previous version of the PM1080 will be accepted.

**ILLINOIS DEPARTMENT OF TRANSPORTATION
POSITION DESCRIPTION**

DATE:	February 2017	POSITION:	Electrical Operations Cadre Engineer
APPROVED BY:	Lisa E. Heaven-Baum	OFFICE/DIVISION:	OHPI/District One/Electrical Operations
CODE:	PW151-23-51-921-00-01	REPORTS TO:	Engineering Section Chief

Position Purpose

This position, under engineering supervision, performs engineering analyses and support services to the Bureau of Electrical Operations in the design, operation, and maintenance of the District's electrical, mechanical and communications systems.

Dimensions

Contract Plans Project:	4 - 8 projects/year
Contract Plans Value:	Up to \$3.0 million
Permit/Foreign Plans Reviewed:	6 – 12 annually
Maintenance Contract Value:	\$23 million annually

Nature and Scope

This position reports to the Engineering Section Chief.

This position operates in an environment that has high traffic densities, extensive mileage, numerous overhead and underground utilities and dealings with over 400 municipalities and agencies in the Chicago metropolitan area. All of which require a great degree of electrical and mechanical design expertise and accuracy to ensure the high quality demanded. This demands greater coordination among various offices and a higher level of accuracy to avoid costly redesign of complex installations. This position is responsible for providing a uniform standard of excellence in design/drafting of electrical and mechanical projects within the District, the processing of construction submittals, and a variety of field data gathering and inspection activities.

The incumbent is responsible for the design and maintenance of electrical systems for construction of the District's highways and for the technical activities relative to the work objectives, dependent upon the specific section to which he/she is assigned. The greatest challenge of this position is to perform engineering work ensuring the application of the Department's latest standards in design to minimize construction, maintenance, and energy costs while meeting proper criteria and acquiring the technical versatility needed to engage in the varied scope activities of the bureau.

When assigned to the Engineering section, the incumbent assists with: designing electrical and mechanical plans and specifications, the evaluation of proposed construction project sites, the performance of field measurements and roadway lighting data analysis, the selection and testing of electrical project components and the review of contractor construction submittals and plans submitted by outside agencies and consultants. Under supervision, he/she will also perform lighting and electrical load calculations.

For a certain period of time, the incumbent may be assigned to the Operations Section. While working in this section, the incumbent inspects and tests to determine proper system revisions, repairs and relocations, and observes and reports upon the activities of the Electrical Maintenance Contractor in the performance of these tasks. Typical challenges encountered in this assignment include verifying system inventory; processing reports and other contractor documentation; following-up on inspection and damage reports via field checks

and the computerized data management system; verifying state stock inventory held by the contractor and monitoring special contract work authorizations. An important aspect of this assignment is the proper monitoring of contract compliance on numerous concurrent activities and assuring timely and accurate documentation of this work. While working in the Operations Section, the incumbent performs some night or off-hours inspection activities as dictated by the maintenance work involved. He/she may be directed to assist and perform other functions in the Operations Section including: inspection of contractor work on various state, federal and local agency projects; routine inspections; and occasional testing of electrical and mechanical equipment; and the inspection of railroad crossings.

For a certain period of time, the incumbent may be assigned to help in the Communications Section. When assigned within this section, the incumbent assists in: the design, construction and installation of radio circuitry and equipment; the collection and organization of Radio Frequency (RF) engineering data (such as topographic information; the location and nature of man-made obstructions, radio interference; signal strength readings, etc.) into a data base to aid in the overall design, operation and modification of the District's radio network. Under supervision, he/she will perform control programming and communication system design. The incumbent will be assigned similar tasks in support of the Department's CCTV and fiber optic systems.

The incumbent, with minimal supervision, accomplishes assigned work in accordance with established written procedures and oral instructions.

The incumbent will have limited contact with other IDOT bureaus, units and sections, consultants, and government agencies concerning ongoing electrical construction programs. The candidate will be required to operate a state vehicle and perform field tasks that include climbing ladders; traversing construction sites on foot and negotiating slopes on foot. District-wide travel and overtime may be necessary to fulfill the duties of this position.

The effectiveness of this position is primarily measured by the candidate's ability to perform assignments in an effective, accurate and timely manner.

Principal Accountabilities

1. Designs neat, accurate and well organized plans to expedite the timely completion of electrical and mechanical projects for compliance with the latest Department and District standards.
2. Ensures accuracy and completeness of data collection, field analyses and inspections.
3. Reviews plans and specifications prepared by outside agencies for compliance with established standards.
4. Reviews construction submittals to ensure compliance with contractual requirements.
5. Conducts project site inspections and tests for compliance with Departmental and District standards.
6. Performs duties in compliance with departmental safety rules. Performs all duties in a manner conducive to the fair and equitable treatment of all employees.
7. Performs other duties as assigned.